



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,950	08/13/2004	Hui-Min Lai	22171-00020-US1	4949
30678 7590 11/05/2007 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20036			EXAMINER PHAM, VAN T	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 11/05/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/710,950	LAI ET AL.	
	Examiner	Art Unit	
	VAN T. PHAM	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/30/2007 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1 and 8 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 5-6, 8, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over sheu et al. (US 6,717,892) in view of Roh (US 20010014062).

Regarding claim 1, Sheu discloses an error compensation method for an optical disk drive, comprising the steps of: detecting an error signal showing the deviation of a focal point from a track of the optical disk drive (see Fig. 5, element 78 and col. 4, line 54-col. 5, line 25)); generating a first sledge driving signal based on the error signal showing the deviation of the focal point (see Fig. 5, element 98, 100); generating a second sledge driving signal based on the

magnitude of the error signal or the first sledge driving signal (see Fig. 5, elements 88, 98, 100, 70); and wherein the second sledge driving signal intermittently drives the sledge to perform error compensation (see col. 5 and Fig. 5).

Roh, discloses an optical disk drive, comprising the steps of: detecting an error signal showing the deviation of a focal point from a track of the optical disk drive (see [0011], Fig. 1), generating a first sledge driving signal based on the error signal (see Fig. 1); generating a second sledge driving signal based on the magnitude of the error signal or the first sledge driving signal (see Fig. 1; selectively driving a sledge of the optical disk by using either the first sledge driving signal or the second sledge driving signal (see [0011, and fig. 1, abstract).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a selecting unit in Sheu as suggested by Roh, the motivation being in order to selectively outputting one of the sled control signals in response to the selecting signal (see Roh [0009]).

Regarding claim 2, the combination Sheu and Roh, discloses the error compensation method for an optical disk drive in accordance with claim 1, further comprising the step of detecting error signals between an actuator and the sledge of the optical disk drive (see Sheu col. 5).

Regarding claim 5, the combination Sheu and Roh, discloses the error compensation method for an optical disk drive in accordance with claim 1, further comprising the step of filtering the error signal smaller than a preset threshold value (see Sheu Fig. 6).

Regarding claim 6, the combination Sheu and Roh, discloses the error compensation method for an optical disk drive in accordance with claim 1, wherein the magnitude of the

Art Unit: 2627

second sledge driving signal is proportional to that of the error signal or the first sledge driving signal (see Sheu cols. 5-6 and Fig. 6).

Regarding claim 8, see rejection above of claim 1.

Regarding claim 11, the combination Sheu and Roh, discloses the error compensation apparatus for an optical disk drive in accordance with claim 8, wherein the error signal further comprises an error signal between an actuator and the sledge of the optical disk drive (see Sheu Fig. 5).

Regarding claim 13, the apparatus of claim 8, further comprising means for driving the sledge with the second sledge driving signal (see Sheu Fig. 5).

5. Claims 1, 3, 6-8, 10-11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 2004/0136282) in view of Roh (US 20010014062).

Regarding claim 1, Chen discloses an error compensation method for an optical disk drive, comprising the steps of:

detecting an error signal showing the deviation of a focal point from a track of the optical disk drive (see Fig. 4, elements 11, 14);

generating a first sledge driving signal based on the error signal showing the deviation of the focal point (see Fig. 5, element 17);

generating a second sledge driving signal based on the magnitude of the error signal or the first sledge driving signal (see Figs. 4, 7, elements 18-19); and

wherein the second sledge driving signal intermittently drives the sledge to perform error compensation (see Fig. 4, elements 20, S1, S2).

Roh, discloses an optical disk drive, comprising the steps of: detecting an error signal showing the deviation of a focal point from a track of the optical disk drive (see [0011], Fig. 1), generating a first sledge driving signal based on the error signal (see Fig. 1); generating a second sledge driving signal based on the magnitude of the error signal or the first sledge driving signal (see Fig. 1; selectively driving a sledge of the optical disk by using either the first sledge driving signal or the second sledge driving signal (see [0011, and fig. 1, abstract).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a selecting unit in Chen as suggested by Roh, the motivation being in order to selectively outputting one of the sled control signals in response to the selecting signal (see Roh [0009]).

Regarding claim 3, the combination of Chen and Roh, discloses the error compensation method for an optical disk drive in accordance with claim 1, wherein the first and second sledge driving signals alternately drive the sledge of the optical disk drive for error compensation (see Fig. 4).

Regarding claim 6, the combination of Chen and Roh, discloses the error compensation method for an optical disk drive in accordance with claim 1, wherein the magnitude of the second sledge driving signal is proportional to that of the error signal or the first sledge driving signal (see Fig. 7).

Regarding claim 7, the combination of Chen and Roh, discloses the error compensation method for an optical disk drive in accordance with claim 1, further comprising the step of dividing the error signal or the first sledge driving signal into segments based on magnitude

Art Unit: 2627

thereof, wherein the second sledge driving signal generated from the error signal or the first sledge driving signal in the same segment has the same voltage (see Fig. 7).

Regarding claim 8, see rejection above of claim 1.

Regarding claim 10, the combination of Chen and Roh, discloses the error compensation apparatus for an optical disk drive in accordance with claim 8, wherein further comprising a switch for intermittent by transmitting either the first sledge driving signal or the second sledge driving signal to the sledge of the optical disk drive (see Fig. 4).

Regarding claim 11, the combination of Chen and Roh, discloses the error compensation apparatus for an optical disk drive in accordance with claim 8, wherein the error signal further comprises an error signal between an actuator and the sledge of the optical disk drive (see Fig. 5).

Regarding claim 13, the apparatus of claim 8, further comprising means for driving the sledge with the second sledge driving signal (see Fig. 4).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over sheu et al. (US 6,717,892), Roh (US 20010014062) in view of Kawada et al. (6,603,717).

Claims 4 and 9:

Sheu discloses the error compensation method for an optical disk drive in accordance with claim 1, wherein the second sledge driving signal is employed to drive the sledge of the optical disk drive.

Kawada discloses a sledge driving signal is employed to drive a sledge of the optical disk drive when a clock signal is at high level (see Fig. 1, elements 11).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a sledge driving signal is employed to drive a sledge of the optical disk drive when a clock signal is at high level in Sheu as suggested by Kawada, the motivation being in order to control a signal representing a servo loop on signal (see Kawada col. 2).

Regarding claim 9, see rejection above of claim 4.

Cited References

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The cited references relate to a method for detecting the speed of a sledge motor in an optical storage device; a method for calibrating center error offset in an optical drive and control system capable of calibrating center error offset; and a method for detecting running speed of sledge motor in optical storage device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN T. PHAM whose telephone number is 571-272-7590. The examiner can normally be reached on Monday-Thursday from 9:00 am-6:00pm.

Art Unit: 2627

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER